

STAT

22 May 1964  
LEGmb-253

Chief, Office of Naval Research  
Department of the Navy  
Washington 25, D. C.

Attention: Code 414, [REDACTED]

Subject: Contract [REDACTED] Application of Perceptron  
Concepts to Photo-Interpretation

Enclosure: Nine Copies of Letter Report No. 27

Dear Sir:

We are enclosing nine copies of Letter Report No. 27  
covering our technical progress under Contract [REDACTED] during  
April 1964.

Of the contract estimated cost as amended by Modifica-  
tion #6 amounting to [REDACTED] we have expended [REDACTED] as of 1 May 1964,  
leaving a balance of [REDACTED] In terms of cumulative labor and indirect  
costs under the contract, the following is a summary as of 1 May 1964:

[REDACTED]

Contract Administrator

cc: Inspector of Naval Material  
1021 Main St.  
Buffalo, N. Y. 14203 (w/encl.)

Additional copies distributed per attached list.

Declass Review by NGA.

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Approved For Release 2005/05/02 : CIA-RDP78B04770A002300030004-1

22 May 1964  
DTH-70:jmr

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[redacted]  
P. O. Box 2143  
Main Post Office  
Washington, D. C.

Dear Bob:

The following are forwarded in accord with our arrangements  
for sending certain materials to you directly:

1. Monthly Letter Progress Report No. 27  
for month of April 1964
2. Letter to ONR from [redacted] dated 22 May 1964,  
Serial LEG:mb-253

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Very truly yours,

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[redacted]  
Administrative Engineer  
Computer Research Department

enclosures (2)

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Letter Report No. 28

Investigation of Perceptron Applicability to

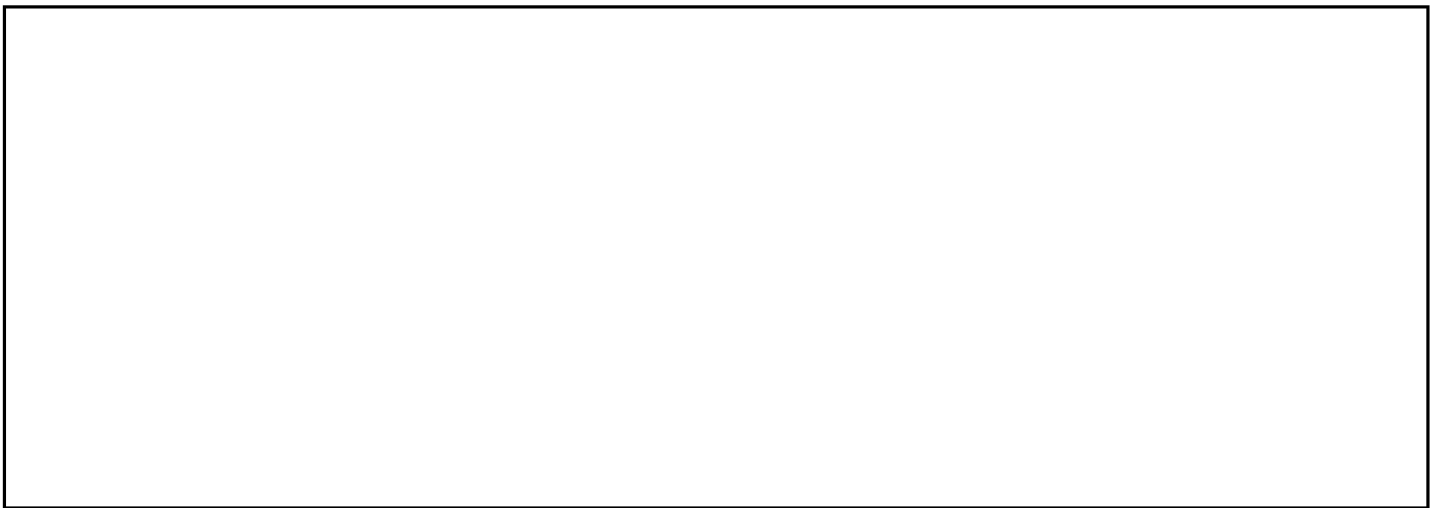
Photo Interpretation



Monthly Letter Report  
for the month of May 1964

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## Letter Report No. 28

Investigation of Perceptron Applicability to  
Photo Interpretation

Monthly Letter Report  
for the month of May 1964

1.0 INTRODUCTION

Project PICS is an investigation of the applicability of perceptrons to automation of certain parts of the photo interpretation task. Particular emphasis is placed on area and object recognition based upon properties derived from two-dimensional power spectra. Accordingly, effort is centered in the following major areas:

- 1) Theoretical and experimental evaluation of the properties which can be derived by optical spatial filtering.
- 2) Design and implementation of a recognition system based upon such properties.
- 3) Design of optical-electronic spatial filtering equipment.
- 4) Research based upon ideas whose immediate applicability cannot be stated, but of long-term benefit.

2.0 ACTIVITY AND ACCOMPLISHMENTS DURING MAY 19642.1 Property Evaluation

This work was terminated at the end of April.

2.2 Design of Optical Electronic Spatial Filtering Apparatus

The addition of light level correction circuitry to the Mark III optical electronic spatial filter improved the dynamic range when the system was used for spatial line detection. The experiments established feasibility of line segment detection; however, a contrast limit was not determined.

The design modifications and tests were terminated during the first two weeks of May.

2.3 Recognition Studies

No work was performed in this area during May.

2.4 Final Report

A survey and compilation of the Mark III implementation work was completed and will be included in the final report.

3.0 PLANS FOR JUNE 1964

The principal activity will be to continue the preparation of the semi-annual status report and the final report.

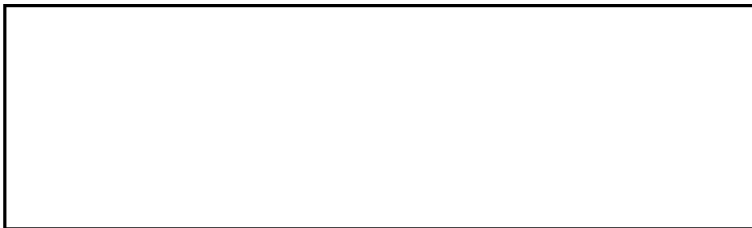
4.0 REPORTS

No reports other than the regular monthly letter report were due or issued during May.

P. O. Box 2143  
Main Post Office  
Washington, D.C.

10 February 1964

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Dear Bill:

I am returning the material that you loaned me at our meeting on 14 January. It has been reviewed with considerable interest. I am looking forward to additional discussion with you about it. I trust copies of this material will be included in the final report.

I intend to visit you toward the end of this month, probably about the 25th. Looking forward to seeing you then.

Sincerely yours,

Enclosure: A/S



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